

CLAIMS

What is claimed is:

1. A computer system comprising:

means for storing data, wherein data are allocated to predetermined categories that are components of at least one stored categorical structure forming an object model, wherein attributes that are passed on within the categorical structure are allocated to the categories;

at least one inquiry unit for making inquiries relating to the stored data; and

at least one inference unit used to evaluate rules linking at least one of said categories and said attributes.
2. The computer system according to claim 1, wherein rules are provided for linking data to at least one of other data, categories, and objects.
3. The computer system according to claim 1, wherein the at least one inference unit, by evaluating said rules, obtains as an output variable at least one of a predetermined subset or a correlation between subsets, wherein the subset or subsets may be at least one of subsets of categories, attributes, and data.
4. The computer system according to claim 1, wherein only simple inheritances are permitted for a categorical structure.

5. The computer system according to claim 1, wherein multiple inheritances are permitted for a categorical structure.
6. The computer system according to claim 1, wherein the rules function to link at least one of categories, attributes, and data of different object models.
7. The computer system according to claim 1, wherein interrelations between stored information of various object models are generated by evaluating the rules of the at least one inference unit.
8. The computer system according to claim 7, wherein the stored information of various object models comprises at least one of categories, attributes, and data.
9. The computer system according to claim 1, wherein the object model is embodied as a DAML+OIL model.
10. The computer system according to claim 9, wherein the rules are in the DAML-L language.
11. The computer system according to claim 1, further comprising a memory unit, associated with the at least one inference unit, in which a predetermined number of rules are stored.

12. The computer system according to claim 1, further comprising an input/output unit connected to the at least one inference unit, wherein the input/output unit is used to input inquiry commands for activating the at least one inference unit.
13. The computer system according to claim 12, wherein a predetermined number of inquiry-specific rules are evaluated when an inquiry command is input into the at least one inference unit.
14. The computer system according to claim 12, wherein the results obtained during the evaluation of the rules in the at least one inference unit are output via the input/output unit.
15. The computer system according to claim 1, wherein said means for storing data comprises a database system.
16. The computer system according to claim 15, wherein the computer system comprises more than one computer.
17. The computer system according to claim 16, further comprising a network to which each computer is connected, and wherein each computer has a database system installed.

18. The computer system according to claim 16, wherein each computer is provided with an Internet connection.
19. The computer system according to claim 16, wherein at least one of categories, attributes, and data from various object models, installed on different computers, are correlated by evaluating the rules in at least one inference unit.
20. The computer system according to claim 19, wherein the at least one inference unit functions as an interface unit for exchanging information between two computers, wherein said interface unit evaluates the rules in order to generate a bi-directional allocation of at least one of categories, attributes, and data for one object model installed on a first computer and of at least one of categories, attributes, and data for a second object model installed on a second computer.
21. A method of storing and retrieving data in a computer system, the method comprising the steps of:
generating a categorical structure in the form of an object model, the categorical structure including categories and attributes associated with the categories, wherein the categories and associated attributes are passed on within the categorical structure;
storing data in the categories within the categorical structure; and

processing at least one inquiry to obtain output by evaluating rules for linking at least one of said categories and attributes with another at least one of said categories and attributes.

22. The method according to claim 21, wherein the step of processing further comprises the step of:
using rules to link data with at least one of other data, categories, and attributes.
23. The method according to claim 21, further comprising the step of:
outputting at least one output variable, in response to said at least one inquiry, the at least one output variable comprising at least one of a subset or a correlation between subsets of at least one of categories, attributes, and data.
24. The method according to claim 21, further comprising the step of:
linking at least one of categories, attributes, and data from different object models using said rules.
25. The method according to claim 24, further comprising the step of:
outputting at least one output variable comprising at least one interrelation between at least one of categories, attributes, and data from various object models.

26. The method according to claim 24, wherein the different object models are stored on different computer systems connected to a network.
27. The method according to claim 26, wherein the network comprises the Internet.
28. The method according to claim 24, wherein the step of processing at least one inquiry further comprises the step of:
entering by a user of one computer system an inquiry applicable to data stored on at least one other computer system.
29. A computer system including a processor executing the method according to claim 21.
30. A computer-readable medium containing software code implementing the method according to claim 21.
31. A computer system comprising:
at least one processor; and
at least one computer-readable medium according to claim 30.

32. The computer system according to claim 31, wherein the at least one processor comprises a plurality of processors, and further comprising:
a network connecting the plurality of processors.
33. A modulated data signal carrying the software code embodied on the computer-readable medium according to claim 30.